Impostor Syndrome and Academic Burnout: A Correlational Study among First-Generation University Students

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Abstract

The current research investigated the correlation between impostor syndrome and academic burnout in first-generation university students, with reference to gender variation. A purposive sampling technique was employed to sample 120 undergraduate students in public-sector universities using the Clance Impostor Phenomenon Scale and Maslach Burnout Inventory-Student Survey. The results showed that impostor syndrome and academic burnout rates were high among the participants, and emotional exhaustion was the most apparent burnout dimension. The relationship between impostor feelings and academic burnout was found to be significantly positive, indicating that, students who had low beliefs in their academic competence had higher chances of being affected by emotional exhaustion, cynicism and lack of academic efficacy. Moreover, the female students also exhibited much more impostor syndrome and burnout than male students, which indicates that there is gender-related psychological vulnerability. These findings are consistent with cognitive-behavioral views, indicating that maladaptive self-belief can enhance the responses to stress and lead to burnout among first-generation students. The results highlight the importance of institutional interventions, such as mentoring programs, psychological health programs, and resilience-building programs, especially among female and first-generation university students. Limitations of the study and future research directions are also covered.

Keywords: Impostor syndrome, academic burnout, gender differences, first-generation students, psychological stress

1. Introduction

The shift to higher education has been frequently followed by various psychological issues, especially among the first-generation university students who have to struggle with their academic tasks without having any previous familial experience with the norms and expectations of the institution (Stebleton et al., 2014). They often feel the extra burden of being the first in the family to access higher education, and this is why they are more likely to experience emotional distress, dissatisfaction with their academic studies and self-doubt (Gibbons & Borders, 2010). The OECD (2021) data shows that first-generation students experience a massive decline in the chances of completing tertiary education as compared to continuing-generation students. Additionally, researchers claim that more than 70 percent of high-achieving individuals state that they feel inadequate despite their successful performance, referring to root psychological dynamics, which disrupt performance and well-being (Clance & Imes, 1978; Parkman, 2016). This formation of high expectations, underrepresentation, and psychological pressures contributes to a certain possible susceptibility of this group, and further research on this issue is needed in order to understand the mental health issues this group faces in the academic setting.

Impostor Syndrome is a mental habit in which vulnerable individuals begrudgingly doubt their talents and feel threatened that they might be discovered as intellectual charlatans, even though they evidently possess some degree of competency and success. First defined by Clance and Imes (1978), Impostor Syndrome describes a psychological pattern in which individuals believe that they are not as competent as others perceive them, and they are afraid that other people are eventually going to realize that they are a fraud in intellectual terms. These people tend to blame their

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achievements on luck, outside assistance, or timing, instead of personal capabilities and efforts. This self-concept creates anxiety, low self-esteem, perfectionism, and overcompensation and this may end up limiting academic, personal, and professional development. It can apply to everyone but it is assumed that high achievers and underrepresented students (e.g. first-generation college students) are at high-risk because they can feel a bit like outsiders on an academic field.

More recent research has broadened our knowledge in the area of impostor feelings development as well as their effects in students. Hutchins and Rainbolt (2017) observed that such sentiments are usually elicited by external comparisons, pressure to perform, and a sense of not fitting in, which may bring about emotional anguish and a dearth of academic self-efficacy. Among the minority students, Cokley et al. (2013) demonstrated that the impostor syndrome is more effective in predicting the psychological distress (e.g., depression and anxiety) than racial discrimination among students. Similarly, Peteet et al. (2015) highlighted that first-generation college students often feel like impostors because they lack educational role models and face pressure to succeed not only for themselves but also for their families.

According to Vergauwe et al. (2015), emotionally, those with high impostorism levels are associated with feelings of emotional exhaustion, fear of failing, and a never-ending internal conflict to keep up performance due to the fear of being found out. This implies that impostor syndrome is not a temporary feeling of insecurity; it is a long-term and mentally demanding process that may harm motivation, academic interest, and overall health.

Academic Burnout is defined as a kind of chronic stress related to academic environments and is marked by three fundamental signs, namely, empathetic cerebral deficiency, an unsympathetic or detached view of the academic endeavor (depersonalization), and a lessened school success and achievement (Schaufeli et al., 2002). It is due to long-term exposure to academic demands, high expectations, and pressure to succeed, frequently without sufficiently developed methods of coping with the situation or support to cope with the situation at the institution. Unlike any typical academic stress, burnout is chronic and disabling; it may considerably deteriorate motivation, participation, and mental well-being of students. The relevance of this syndrome in relation to university students is specifically applicable to first-generation students, in the sense that they bear the two-fold burden of academic success and social mobility.

Salmela-Aro and Read (2017) found that students suffering burnout tend to complain more about academic pressure, loss of interest, and mental health conditions, comprising depressive symptoms. Isolation and lack of emotional engagement were also found as a consequence of perfectionism and fear of failure to cause the burnout among the learners (Zhang et al., 2007). The results presented by Yang (2004) indicate that academic burnout leads to poor grades, decreased persistence, and higher chances of dropout among students studying in institutions with high demand.

In a more recent meta-analysis among a sample of more than 100,000 students, Madigan and Curran (2020) reaffirmed the existence of a negative correlation between academic burnout and academic performance, as well as psychological well-being, making academic burnout a major predictor of academic failure and emotional distress. Academic burnout does not only have direct consequences on academic performance, but also on the long-term perspectives of the academic life of students, their self-esteem and identity formation. In first-generation students, where insufficient guidance or mentoring is common in families, such effects can be more severe, and it

is therefore critical such instances are acknowledged, avoided, and addressed through institutional-based approaches to academic burnout.

The first-generation students in the university tend to go through higher education without family guidance, which exposes them to greater risk of psychological stressors. The continuing self-doubt even after having proved capable- key to impostor syndrome- can contribute to academic stress and unhealthy overworking. Simultaneously, such students are at high risk of academic burnout because of the sustained demands, a lack of support, and high expectations. Although the constructs are increasingly gaining interest, the relationship between the two is under-researched in the first-generation students group. The relationship linking impostor syndrome and academic burnout is vital to explore a neglected internal risk factor that can lead to exhaustion and disengagement and inform intervention-oriented strategies to address academic perseverance and mental health among first-generation university students. This study worked on the following research hypotheses.

H1: Impostor syndrome is positively correlated with academic burnout among first-generation undergraduate students.

H2: Impostor syndrome is positively associated with emotional exhaustion and cynicism, and negatively associated with academic efficacy.

H3: Female first-generation undergraduate students report higher levels of impostor syndrome compared to their male counterparts.

H4: Female first-generation undergraduate students report higher levels of academic burnout compared to their male counterparts.

2. Methodology

2.1 Sampling and Research Design

The given study used a correlational research design to discuss the correlation between the concept of impostor syndrome and academic burnout in first-generation university students. This research design was chosen due to the possibility of exploring the naturally existing changes in psychological terms without the operation of variables (Creswell & Creswell, 2017).

To summarize, a purposive sampling technique was undertaken to obtain a sample of 120 first-generation undergraduate students (n = 60 males, n = 60 females) who were enrolled in universities in the public sector. The participants were modeled in accordance with predetermined factors of inclusion, such as being a first-generation immigrant, meaning that one did not obtain a university degree, whereas none of their parents did the same. The sample size had a mean age of 21.7 years (SD = 1.82) between 18 and 25 years.

2.2 Measures

2.2.1 Personal demographic sheet

Form contained age, gender, discipline (e.g. social sciences, natural sciences, arts and humanities), and house background (urban or rural). They also had to confirm their first-generation status that was operationally defined, and this meant that they had no parent with a university level degree.

2.2.2 Clance Impostor Phenomenon Scale (CIPS – *Clance, 1985*)

Impostor feelings were assessed by means of the Clance Impostor Phenomenon Scale (CIPS; Clance, 1985). The instrument contains 20 questions, each measured on 5 points Likert scale (1 = Not at all true to 5 = Very true). The present study showed that Cronbach alpha was utilized and internal consistency reliability Cronbach alpha =.811.

2.2.3 Maslach Burnout Inventory–Student Survey (MBI-SS – *Schaufeli et al., 2002*)

Academic burnout was assessed with the tool Maslach Burnout Inventory Student Survey (MBI Student Survey; Schaufeli et al., 2002), consisting of three sub scales of emotional exhaustion, cynicism, and diminished academic achievements. The current sample demonstrated the full scale internal consistency reliability of α = .75.

2.2.4 Procedure

The participants were made aware of the nature of confidentiality and voluntary participation, and the purpose of the study was clarified to them before data collection. The institution gave moral consent to the study, and all the participants signed informed written consent. The data were gathered in three classrooms through a paper-based questionnaire, which contained sociodemographic items and the research scales, taking about 15 to 20 minutes to complete. The participants were guaranteed confidentiality and anonymity of the process and the APA ethical principles, and the recommendations of the institutional review board (IRB) were followed. Subsequently, SPSS version 21 was used to analyze the obtained data and determine descriptive statistics, estimation of reliability, correlation tests, and the use of independent-samples t-tests.

2.2.5 Ethical considerations

This research was carried out following the ethical code of the American Psychological Association (APA) and the institutional review board (IRB) in the universities involved. Data collection was done with ethical approval beforehand. Everyone was made well aware of the study purpose, procedures and the voluntary nature of the study. Each participant received written informed consent and was assured the confidentiality and anonymity of his/her response. The respondents were also made aware of their free will to pull out of the study at any time without any adverse effects. The research processes were within acceptable risks to the participants, and all records were properly kept and used in the study.

3. Results and Discussion

3.1 Socio-demographic Profile of Sample

A total of 120 first-generation undergraduate students were involved in the study, with an equal proportion of men and women, 60 percent (n=60), and 40 percent (n=60), respectively. The age ranged between 18 and 25 years (M = 21.7, SD = 1.82). With regards to academic background, a quarter (25) belonged to the disciplines of arts and humanities, 35 percent to natural sciences, and 40 percent to social sciences. Most of the participants were urban people (67%), and 33 percent were rural people. All the participants were confirmed to be first-generation students, meaning that they had no university-degreed parents.

Table 1. Descriptive Statistics and Reliability Coefficients for Study Variables and Subscales (N = 120)

Variable	*M*	*SD*	Range	α
Impostor Syndrome	64.20	9.27	20–100	.81
Academic Burnout (Total)	58.89	12.19	15–75	.76
– Emotional Exhaustion	21.40	5.05	5–25	.79
– Cynicism	18.36	4.82	5–25	.74
– Academic Efficacy	19.13	4.92	5–25	.77

Note. M = Mean; *SD* = Standard Deviation; α = Cronbach's Alpha (internal consistency reliability).

Table 1 shows the descriptive statistics indicated that the average total score on the Impostor Syndrome was 64.20 (*SD = 9.27),* indicating that the sample had moderate levels of

experiencing impostor feelings. The overall mean score of Academic Burnout was 58.89 (*SD = 12.19),* which indicates the moderate overall extent of burnout symptoms. The Emotional Exhaustion subscale indicated the highest means (*M = 21.40, SD = 5.05*) as well as Reduced Academic Efficacy *(M = 19.13, SD = 4.92*) and Cynicism (*M = 18.36, SD = 4.82*). Internal consistency of all scales was acceptable to good with an α of 0.74 to 0.81, reflecting that the instruments used were reliable to measure the intended psychological parameters in the population of study.

Table 2. Pearson Correlations Between Impostor Syndrome and Academic Burnout and Its Subscales (N = 120)

Variable	1	2	3	4	5
1. Impostor Syndrome	—	.52**	.48**	.42**	−.36**
2. Academic Burnout (Total)		—	.86***	.79***	−.74***
3. Emotional Exhaustion			—	.61***	−.52***
4. Cynicism				—	−.44**
5. Academic Efficacy (reversed)					—

Note: p < .05, p < .01, p < .001

Table 2 illustrates positive and significant moderate correlation between imposter syndrome and academic burnout (r = 0.52; p <0.01), which means that the stronger the imposter, the more burnout. It was also strongly connected with greater emotional fatigue and cynicism and reduced academic efficacy. These results indicate that the students with limited confidence tend to experience an overload, lack of connection with studies, and reduced self-confidence when they have low confidence in their abilities.

Table 3. Gender Comparisons of Impostor Syndrome and Academic Burnout Among First-Generation Students (N = 120)

Variable	Gender				*t*	*df*	*p*	Cohen's *d*
	Male		Female					
	M	*SD*	*M*	*SD*				
Impostor Syndrome	66.80	11.90	71.80	13.01	−2.14	118	.035	−0.40
Academic Burnout	49.60	10.12	53.80	11.22	−2.07	118	.041	−0.39

*Note***.** *M* = Mean; *SD* = Standard Deviation; *df* = degrees of freedom. *Significant at p* < .05.

The independent-samples t tests were used to determine the differences between genders in impostor syndrome and academic burnout. There was a small-to-moderate effect size (Cohen d = -.40) but no significant difference between females (M = 71.80, SD = 13.01) and males (M = 66.80, SD = 11.90) in impostor syndrome. On academic burnout, too, the female score (M = 53.80, SD = 11.22) was higher than the male score (M = 49.60, SD = 10.12), t (118) = -2.07, p =.041, and the effect size was small-moderate (Cohen d = -.39).

3.2 Result Discussion

This research study sought to test the hypotheses that there is an association between impostor syndrome and academic burnout in first-generation undergraduate students with gender differences highlighted. A strong positive relationship was established between academic burnout, as hypothesized, with impostor syndrome. This conclusion corresponds to the earlier research results according to which those people who have impostor-feelings tend to describe their stress level, emotional exhaustion, and feeling disengaged at school comparatively heavily (Bernard et

al., 2002; Parkman, 2016). The findings indicate that students, who are not confident of their academic legitimacy or who may feel like impostors, are more susceptible to manifestations of burnout, perhaps because they are plagued by their minor reservations to continue being impostors.

Furthermore, it was found that the impostor syndrome was substantially linked to the major aspects of academic burnout, such as emotional exhaustion and cynicism, and negatively correlated with academic efficacy. The results can be justified by earlier studies that suggested that NI subjects are more prone to experience emotional exhaustion, disconnection with their study, and low confidence in school capabilities (Cokley et al., 2015; Hutchins et al., 2018). The need to distinguish negative association with academic efficacy indicates a possible negative cycle, such as, the feelings of being unable to achieve something lead to lack of effort and self-efficacy perception, which, in turn, could support impostor thoughts.

Gender comparison also revealed that females reported a much higher rate of impostor syndrome and academic burnout compared to males, a result that is actually consistent with previous studies made on impostor syndrome, which claim that females, more so those navigating higher education with minimal or no family or parental history of higher education, are more inclined towards self-doubt and emotional fatigue than their male peers (Clance & Imes, 1978; Topping & Kimmel, 1985). This is consistent with the third and fourth hypotheses and can underline gender as an important characteristic of the psychological experience of academic stress in the first-generation learners. Theoretically, the findings could be explained within Social Comparison Theory (Festinger, 1954) that states that people are guided by comparisons with other people and compare themselves to these models. First-generation students, especially women, might compare themselves upward to students that seem more academically secure or more ready, also strengthening impostor ideas and fight or flight reactions. Moreover, Cognitive Appraisal Theory (Lazarus & Folkman, 1984) indicates that the manner in which students appraise their academic setting and academic self-efficacy contributes towards emotional related consequences such as burnout. Students who feel that their abilities are not sufficient will more likely view academic challenges as threats as opposed to opportunities leading to emotional exhaustion.

4. Conclusion and Recommendations

It is concluded that there is a positive association between the impostor syndrome and academic burnout amongst first generation undergraduate students. Both were found to be higher in female students, but there was a major difference between genders. The results are consistent with past studies and can be explained by Social Comparison (and Cognitive Appraisal) theories, which indicates that emotional exhaustion in a negative aspect is caused by self-doubt and negative academic assessments. These outcomes underline the necessity of specific interventions to assist the first-generation pupils, in particular women to maintain stress levels in their academics and develop self-efficacy.

4.1 Limitations and Implication

In spite of the informative points, there are limitations to the study. Its cross-sectional design limits causal inference, and bias caused by social desirability may affect the use of self-report measures. Besides, a gender-balanced sample might not be diverse in general in the context of socioeconomic status, institutional support, or the regional disparity. Nonetheless, the results have significant consequences on the university support services. It is possible to use interventions focusing on impostor beliefs to mitigate the risk of burnout among first-generation students: cognitive restructuring, peer mentoring, and counseling can be used. Add also gender-sensitive

approaches that aim at coping with female students under the special pressures they experience at school.

4.2 Recommendations

The following studies could investigate protective aspects, including resilience, social support, and coping mechanisms, to gain a clearer insight into how first-generation students can overcome impostor syndrome and avoid academic burnout.

References

Bernard, D. L., Lige, Q. M., Willis, H. A., Sosoo, E. E., & Neblett, E. W. (2022). Impostor phenomenon and mental health: The influence of racial discrimination and gender. *Journal of Counseling Psychology, 66*(2), 176–188. https://doi.org/10.1037/cou0000313

Clance, P. R., & Imes, S. A. (1978). The impostor phenomenon in high achieving women: Dynamics and therapeutic intervention. *Psychotherapy: Theory, Research & Practice, 15*(3), 241–247. https://doi.org/10.1037/h0086006

Cokley, K., McClain, S., Enciso, A., & Martinez, M. (2013). An examination of the impact of impostor feelings on the academic self-concept of ethnic minority college students. *Journal of Multicultural Counseling and Development, 41*(2), 82–92. https://doi.org/10.1002/j.2161-1912.2013.00029.x

Covarrubias, R., & Fryberg, S. A. (2015). Movin' on up (to college): First-generation college students' experiences with family achievement guilt. *Cultural Diversity and Ethnic Minority Psychology, 21*(3), 420–429. https://doi.org/10.1037/a0037844

Festinger, L. (1954). A theory of social comparison processes. *Human Relations, 7*(2), 117–140. https://doi.org/10.1177/001872675400700202

Gibbons, M. M., & Borders, L. D. (2010). Prospective first-generation college students: A social–cognitive perspective. *The Career Development Quarterly, 58*(3), 194–208. https://doi.org/10.1002/j.2161-0045.2010.tb00186.x

Hutchins, H. M., & Rainbolt, H. (2017). What triggers impostor phenomenon among academic faculty? A critical incident study exploring antecedents, coping, and development opportunities. *Human Resource Development International, 20*(3), 194–214. https://doi.org/10.1080/13678868.2016.1248324

Kumar, S., & Jagacinski, C. M. (2006). Impostors have goals too: The impostor phenomenon and its relationship to achievement goal theory. *Personality and Individual Differences, 40*(1), 147–157. https://doi.org/10.1016/j.paid.2005.05.014

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping.* Springer.

Madigan, D. J., & Curran, T. (2020). Does burnout affect academic achievement? A meta-analysis of over 100,000 students. *Educational Psychology Review, 33*(2), 387–405. https://doi.org/10.1007/s10648-020-09535-1

Organisation for Economic Co-operation and Development. (2021). *The state of global education: 18 months into the pandemic.* OECD Publishing. https://doi.org/10.1787/1a23bb23-en

Parkman, A. (2016). The impostor phenomenon in higher education: Incidence and impact. *Journal of Higher Education Theory and Practice, 16*(1), 51–60.

Peteet, B. J., Montgomery, L., & Weekes, J. C. (2015). Predicting academic achievement and grade satisfaction among first-generation college students. *Journal of College Student Development, 56*(7), 735–740. https://doi.org/10.1353/csd.2015.0072

Salmela-Aro, K., & Read, S. (2017). Study engagement and burnout profiles among Finnish higher education students. *Burnout Research, 7*, 21–28. https://doi.org/10.1016/j.burn.2017.11.001

Schaufeli, W. B., Martínez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: A cross-national study. *Journal of Cross-Cultural Psychology, 33*(5), 464–481. https://doi.org/10.1177/0022022102033005003

Stebleton, M. J., Soria, K. M., & Huesman, R. L., Jr. (2014). First-generation students' sense of belonging, mental health, and use of counseling services at public research universities.

Journal of College Counseling, 17(1), 6–20. https://doi.org/10.1002/j.2161-1882.2014.00044.x

Stephens, N. M., Hamedani, M. G., & Destin, M. (2012). Closing the social-class achievement gap: A difference-education intervention improves first-generation students' academic performance and all students' college transition. *Psychological Science, 23*(9), 943–953. https://doi.org/10.1177/0956797612439067

Topping, M. E. H., & Kimmel, E. B. (1985). The impostor phenomenon: Feeling phony. *Academic Psychology Bulletin, 7*(2), 213–226.

Vergauwe, J., Wille, B., Feys, M., De Fruyt, F., & Anseel, F. (2015). Fear of being exposed: The trait-relatedness of the impostor phenomenon and its relevance in the work context. *Journal of Business and Psychology, 30*(3), 565–581. https://doi.org/10.1007/s10869-014-9382-5

Yang, H. J. (2004). Factors affecting student burnout and academic achievement in multiple enrollment programs in Taiwan's technical–vocational colleges. *International Journal of Educational Development, 24*(3), 283–301. https://doi.org/10.1016/j.ijedudev.2003.12.001

Zhang, Y., Gan, Y., & Cham, H. (2007). Perfectionism, academic burnout and engagement among Chinese college students: A structural equation modeling analysis. *Personality and Individual Differences, 43*(6), 1529–1540. https://doi.org/10.1016/j.paid.2007.04.010